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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/712,834 | 11/12/2003 | Jacques Dov Barth | P1552 | 9516 |

7590 08/11/2005
Averill & Varn
9244 Painter Ave.
Whittier, CA 90602

EXAMINER

JAWORSKI, FRANCIS J

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3737

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Pat

| | | | |
|------------------------------|---------------------------------|-----------------------------|--|
| Office Action Summary | Application No. 10/712,834 | Applicant(s) BARTH ET AL | |
| | Examiner Jaworski Francis J. | Art Unit 3737 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19 is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 6-13, 16-17 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Selzer et al (US20040116813).

Selzer et al teaches a method for automatically defining by an iterative edge detection process using vertical scan slicing planes the longitudinal profile of the carotid arterial cross-section as a region of interest by means of digitized video imaging for purposes of repeatable quantified intima-media thickness measurements along the near and far walls and replicated for the same patient over time in the region of the carotid bifurcation and bulb. A prior ultrasound image of this region 56 is juxtaposed to a current realtime image 58, for a region extending from approximately .5 cm distal to the carotid bulb along a 1 cm length including the bifurcation region. Edge point pixel pairs are used in the slice measurements (para [0091].) in order to quantify the IMT with high confidence by an averaging process. The angle of the carotid is used to define the bulb (para [0113]) in a process involving the automated edge detection for the images. The display region in Figs. 6 is automatically set higher and wider than the vessel location.

Operator guidance is invoked and the dimensions of the ROI are set by the anatomic size of the vessels of the patient which includes half-cm sizings. Computer 48 cabled to the ultrasound modules serves to process the ROI analysis stages.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Selzer et al in view of Stein (US6730035). Since the latter in col. 4 top portion defines the lesion portions for which carotid quantified IMT measurements are to be tracked for long-term risks include centimeter length regions proximal to, distal to and including the immediate bifurcation and bulb regions it would have been obvious to include such distances in the IMT calculations of Selzer et al.

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Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Selzer et al further in view of Hossack et al (US6503202) cols. 6-7 since the latter both establishes that the automated regional length ranges as called for in the dependent claims 4-5 as well as automated branch point determinations based upon branch characteristics were well known in an analogous fully automated technique for carotid region of interest identifications. Otherwise the arguments involving Selzer et al generally apply.

Allowable Subject Matter


Claim 19 is allowed.

Greenberg et al is cited as of interest in teaching fully automated carotid artery profiling for stenosis evaluation using an x-ray imaging system.

Any inquiry concerning this communication should be directed to Jaworski Francis J. at telephone number 571-272-4738.

FJJ:fjj

08052005


Francis J. Jaworski
Primary Examiner